Nutrition News

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FOOD WILL BUILD A NEW AMERICA

By Thomas Parran, M. D.
Surgeon General
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Today we are preparing to defend not so much the square miles of land that represent the 48 states, our territories and possessions, nor an island here, or the bulge of a continent there —but the men, women, and children who are the United States. We must be willing, yes, eager to sacrifice comforts, convenience, money, even life itself, to insure our freedom and the freedom of our children to choose our own and their own way of life.

The Role of Nutrition

The science of nutrition is about as young as the science of aviation. We do not know all the answers in either field. But as much, relatively, is known about what nourishes a human body as is known about what gets a heavy machine up in the air and to its destination safe. The difference is that far less of the nutritional knowledge is put to work.

In the past two decades there have been breath-taking discoveries on many nutritional fronts. Tomorrow's civilization can be made vastly different, and far better than today's, if we put to work now, what we know now, about the nutrition of human beings.

Recently the top nutrition experts in the nation have put before us enough basic facts to stimulate national thinking and speed united action. These facts have been considered by agricultural economists, by educators, by food processors and distributors, by community leaders, by family doctors. Blueprints for national action have been drawn. The facts make clear that while nutrition is an individual and family problem, it is also a community and national problem.

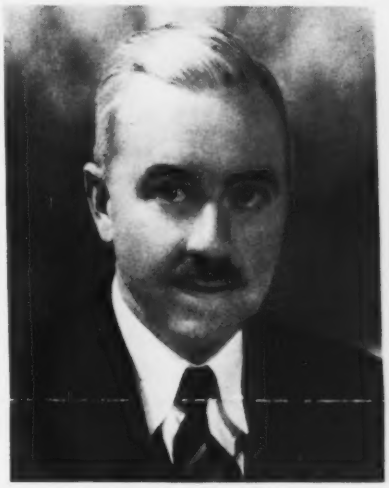
For the first time these top experts have drawn the specifications for a diet adequate for good health — a "gold standard for nutrition." These specifications represent no narrow list of foods, but a wide choice that can be purchased cheaply anywhere in the country, yet which will provide for men, women, and children the nutrition essentials for life and buoyant health.

Doctor Sherman has told us that if we replace an **average** diet with an **adequate** diet, we get a ten per cent increase in the active virile life span. This would mean more in terms of human longevity than to wipe out cancer as a cause of death. We have been told that through nutritional science we can eliminate the "half-health, half-strength, half-happiness" which results from a diet not quite good enough.

Here in America we happen to have plenty of fertile land to supply every element of a full and adequate diet to the present population and any prospective increase. This is true in spite of the past exploitation of agricultural resources. Nature puts into the foods we eat the vital elements necessary for balanced health. Many of them we have depleted through our zeal for over-refining and by modern cooking methods. Modern diets are deficient, too, in other respects. To give to all what all of us need, nutritionally, we should increase by nearly 50 per cent our national production of milk and milk products.

Our Purpose

The purpose of the national nutrition program: **To Build a Stronger Race Through Good Food,** will require the united efforts of agriculture, economics, public health, nutritional science, industry, and education.



Doctor Parran

Through soil conservation we can grow better food; more of it, and more rich in vital elements. The farmers will divert acres now growing cotton, tobacco, and wheat into pasture for dairy herds, into home gardens, into production of food for cattle, sheep, pigs, and chickens.

The food and nutrition experts will continue and increase their efforts. Theirs must be the responsibility for teaching citizens what a better diet will mean to every American. No longer will they be as a "voice crying in the wilderness." They will have strong reinforcements from many directions.

If our farmers go to work to see that all of us are properly fed— themselves and their families included —the rest of us will return the investment to them many times over through greater production and greater prosperity.

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Glances AT NUTRITION RESEARCH

Nutrition research is the initial step in providing a firm foundation for the development of educational material to be used in improving the food habits and thereby the health and strength of the people of our country.

Vitamin C in Milk — A study of the vitamin C content of milk at all points during the process of moving milk from the cow to the consumer shows that the amount of vitamin C appears to vary indirectly with the amount of oxygen in milk. A process has been developed whereby milk can be deaerated during pasteurization and bottling and, as a result of this process, 80 per cent of the vitamin C content of freshly drawn milk may be retained.

—J. Milk Tech. 4: 138 (May-June) 1941.

Calcium Utilization — When milk was the sole source of calcium in the diet, rats were found able to utilize 87 per cent of their calcium intakes. When dried broccoli supplied one half of the calcium of the diet, utilization was decreased to 79 per cent. When dried cauliflower was the source of one half of the calcium of the diet, the utilization of this mineral was further decreased to only 69 per cent.

—J. Nutrition 22: 477 (November) 1941.

Influence of Prenatal Diet — A study was made of the prenatal diets of 400 women with low incomes. One group whose diet was rated poor was left as a control and referred to as the Poor Diet Group. Another group with diet rated equally poor was provided with the following protective food supplements: each day, 30 ounces of milk, 1 egg, 1 orange, a wheat germ preparation with added iron, and a viosterol capsule containing 2000 I.U. of vitamin D; each week, two 16-ounce tins of factory canned tomatoes and one-half pound of cheddar cheese. This group was referred to as the Supplemented-to-Good Diet Group. A third group whose diet had been rated as good was given only advice as to how to improve the diet and was referred to as the Good Diet Group.

The mothers on the supplemented and on the good diets enjoyed better health during pregnancy and had fewer complications than those on poor prenatal diets. The incidence of illness in the babies up to the age of six months was many times greater in the Poor Diet Group.

—J. Nutrition 22: 515 (November) 1941.

Honey and Calcium — Data are presented from 120 metabolism periods completed on 14 normal, healthy, male infants studied during the first six months of their lives. Honey as a source of carbohydrate was compared with corn syrup for use with different types of milks and for varying levels of vitamin D. For all the paired periods studied, the average retention of calcium was always higher if honey had been included in the formula. These increased retentions when honey was fed occurred with both low and high intakes of vitamin D and occurred regardless of the type of milk fed or the use of lactic acid.

J. Pediat. 19: 485 (October) 1941.

TIMELY TOPICS

DR. PARRAN

Dr. Thomas Parran, author of the leading article in this issue, recently visited England, as one of a group of prominent Americans, to study the British methods of handling emergency situations during air raids. Dr. Parran was especially interested in the public health problems presented by air raid shelters and evacuation centers.

NUTRITION DEFENSE

Nutrition activities for defense at the Federal level are directed by: Mr. Paul McNutt, Director of Defense, Health, and Welfare Services; Mr. M. L. Wilson, Assistant Director in charge of Nutrition; and Dr. Helen Mitchell, Principal Nutritionist. Regional Directors of Nutrition are soon to be appointed by the federal office to serve in each Social Security Area as coordinators of nutrition activities in those regions.

STATE ACTIVITIES

In response to a request by the Federal Government, nutrition committees have now been organized in every state. Twenty states have already held nutrition conferences and have developed plans for state nutrition programs. As an outgrowth of these nutrition conferences several states have now organized nutrition committees at the county level.

THE EFFECT OF ADEQUATE DIET ON TEETH DURING PREGNANCY

By Dr. E. D. Plass, Department of Obstetrics and Gynecology
University of Iowa

A study of the calcium, phosphorus, and nitrogen metabolism of five pregnant women indicates that an adequate diet may protect women from dental decay and loss of teeth during pregnancy. These women were receiving prenatal care at the University of Iowa and remained in the University Hospital during the entire study. The meals planned for use during the experimental period were believed to be nearly ideal to promote growth and development of the unborn child without depleting the mother's tissues of calcium, phosphorus, and nitrogen.

Experimental Diet

The foods used in this study were selected from those included in the general prenatal diet prescribed at the University of Iowa. One ten-day metabolic balance period was carried on each month for each woman. During this period the same foods were consumed daily. Included each day were the following foods: 1 quart or more of milk, at least 1 egg, at least 2 servings of vegetables, at least 2 servings of fruit—1 raw, at least 1 ounce of butter, 1 serving of cottage cheese, 1 serving of ice cream, 1 teaspoonful of cod liver oil, and bread, cereals, and potatoes in quantities to satisfy the appetite. One woman who was diabetic ate practically the same meals as the others except that her fat intake was increased and her carbohydrate intake was decreased. Between the metabolism periods variations of these meals were eaten but they were equivalent in composition to the experimental diet.

Effect of Diet

A careful study of the literature was made to find data on fetal requirements of calcium, phosphorus, and nitrogen. All figures thought to be valid were combined and graphed against the time of pregnancy in weeks and weight of the fetus according to Streeter's tabulation.

The data thus obtained were then compared with the actual amounts of these three elements stored by the Iowa women during the latter half of pregnancy. In every case calcium was stored in excess of the needs of the baby. In all but one case phosphorus was stored in excess of the baby's needs. Nitrogen retentions were found to be more variable. Two of these balances failed to meet the fetal requirements but the others were all more than adequate. Altogether 21 ten-day balance periods were carried on from the fifth through the tenth months before the birth of the baby.

The teeth of these women were also observed carefully during the entire study. All were found to have caries at admission. At the end of the study there was no new caries, one case showed complete arrest of decay, and in the others consistent improvement was noted.

These observations suggest that, by adequate dietary regulation, prospective mothers may be protected against severe destruction and loss of teeth in pregnancy.

In the diet used for this study, two thirds to three fourths of the calcium, at least one half of the phosphorus, and nearly one half of the nitrogen intake came from milk or milk products. The importance of using large quantities of milk and certain of its prepared products cannot be over-emphasized. No other single food substance will supply these dietary constituents as abundantly as milk.

VOLUNTEERS IN A COMMUNITY NUTRITION PROGRAM

By Mrs. Mary Stilwell Buol,
Assistant Director for Home Economics Extension Service,
University of Nevada

Just now when volunteer services to aid in the nutrition defense program are in such demand, we are pleased to write that a volunteer program has been functioning for nineteen years among the rural communities of the state of Nevada. A **Keep Growing** project is organized on a community basis to demonstrate what it is that makes children keep growing. The general aims of this project are:

1. . To arouse a large proportion of a scattered rural population to a realization of existing nutritional conditions, and to supply an effective motive for improvement.

2. . To secure definite, measurable results that would serve as a guide and incentive for future work.

3. . To concentrate effort on a few essential factors in order to conserve time and expense, because of limited funds and personnel.

4. . To establish permanently some form of nutrition and health work under local responsibility, with a minimum of future assistance from the Extension Service.

A preliminary study of existing conditions made prior to the inauguration of this **Keep Growing** project in 1922 strongly indicated that a considerable proportion of Nevada's population was in a state of malnutrition. A large percentage of the school and preschool children were found to be very much below average weight for age and height. Physicians' examinations revealed many indications of malnutrition, including poor bone and tooth development. There were also many other signs of poor nutrition among the whole rural population.

Observations of food habits in homes and public eating places supplemented by food habit surveys carried on through group meetings, showed that the general diet in Nevada at that time was made up largely of meat, bread, potatoes, sweets, and fats.

When the program was well under way, state goals for good nutrition were set up each year and records kept of the per cent attainment of these goals. Now, after nineteen years continuous work the goals set for nutrition and health activities were, for the first time, met (and exceeded) both at the beginning and end of the last demonstration year. Some of the methods used to keep this program functioning

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DID YOU KNOW ?

—that people are drinking more milk? In 152 of the largest markets of the country the daily consumption is up over 400,000 quarts per day more than that of one year ago.

—that the most contagious of all known diseases is the common cold?

—that whale milk, wildlife experts say, is not essentially different from cow's milk?

—that an extensive poll in which housewives were asked, "If you had more food money, what would you spend it on?" disclosed that about one third would buy more vegetables, fruits, and dairy products?

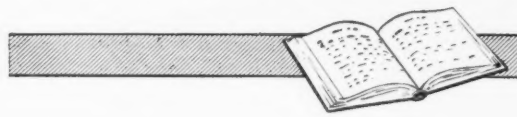
—that loaves of bread 2500 years old may be seen in the Metropolitan Museum of Art in New York City? They were dug up at Thebes, in Egypt and are dry and hard but not petrified.

—that carrot lollipops sold to English children to provide vitamin A, consist of a carrot on a stick plus sugar syrup coating?

—that with the possible exception of the tortoise, man probably has a longer life expectancy than any other animal known?

—that a new army ration for use in emergency by parachutists, aviators, and fast-moving mechanized troops is being tested out on soldiers at Fort Snelling, Minn.? Three meals for one man contain 3726 calories and have a total weight of 32.86 ounces.

THINGS YOU'LL LIKE TO READ



FOOD AND NUTRITION — American National Red Cross, Washington, D. C. Revised, October, 1941. 25 cents.

This pamphlet has been revised to correspond with the new dietary standards set up by the Committee on Food and Nutrition, National Research Council. It is suggested as a text for beginning nutrition courses, especially for untrained volunteer workers in the national nutrition program for defense.

NUTRITION IN HEALTH AND DISEASE—Cooper, Barber, and Mitchell. J. B. Lippincott Co., Philadelphia, 1941. Eighth edition. $3.50.

The new edition of this textbook, which was reviewed in Nutrition News 4: 12 (Feb.) 1941, is now off the press.

FAMILY FOOD CONSUMPTION AND DIETARY LEVELS—Stiebeling, Monroe, Coons, Phipard, and Clark. Bureau of Home Economics, U. S. Department of Agriculture, Washington, D. C., 1941. 35 cents.

This report presents data about the food consumption by farm families at different income levels in five regions of the United States.

THE ROLE OF THE TEACHER IN HEALTH EDUCATION — Strang and Smiley. The Macmillan Co., New York, 1941. $2.00.

This book is a guide for school teachers, giving suggestions for everyday health education programs. Included are references and materials to aid in carrying out these types of programs.

VOLUNTEERS IN A COMMUNITY NUTRITION PROGRAM

(Continued from Page Seven)

are as follows: Records of height, weight, tooth conditions, posture, and other indications of good physical development are used to measure progress. Interest is stimulated by classroom instruction and correlated health activities such as posture games, health booklet contests, and the celebration of Child Health Day as **Keep Growing** achievement days. Ability to make good growth is fostered through community cooperation in supplying one or more local leaders to assist the extension agent and to carry on in her absence.

The success of the program in 1941 is attributed to the following factors: a wise use of summer vacation, better noon lunches, development and maintenance of good posture, correction of physical defects, providing the right foods at home, work with transients, and work with the unusual child who, despite the earnest efforts of everybody concerned, still continues in poor nutritional condition.

A live-at-home campaign for home food production and preservation has for many years been a close ally of the **Keep Growing** project. The Land-Use home and community surveys show that in areas where climate and water permit, from 75 per cent to 90 per cent of farm families produce a major part of their food. Another evidence that this live-at-home campaign has assisted in the **Keep Growing** project is the fact that Nevada rural per capita milk consumption is 0.9 quart per day, whereas urban consumption per person is only 0.3 quart per day. **Keep Growing** demonstrators have educated rural families regarding the value of milk, and the family cow makes it possible for them to have an adequate supply.

We especially like to bring out the fact that the **Keep Growing** project is founded on a community basis, involving all the school children in these communities, that the work is sponsored by the community, and that a large part of the work is done by lay leaders who are trained and guided by the home demonstration agents. We believe that these lay leaders have made it possible for the Nevada Extension Service with only a pittance of money and very few workers—four to six—to reach 2,000 to 3,500 children a year and definitely influence not only their nutrition habits, but the nutrition of their families. We believe these volunteer leaders know the psychology of their communities better than any professional non-resident worker can know it, and, therefore, secure better results than anyone else.

Note—A mimeographed sheet containing references to all major items mentioned in NUTRITION NEWS may be obtained on request from the National Dairy Council, Chicago, Illinois.